INTERNATIONAL JOURNAL OF MEDICAL AND APPLIED SCIENCES
eISSN:2320-3137
Earthjournals Publisher
www.earthjournals.in

REVIEW ARTICLE

EFFICACY OF PHOENIX DACTYLIFERA LINN AS A GOOD HAEMATINIC IN THE PREVENTION OF IRON DEFICEINCY ANAEMIA- A REVIEW

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Publication history: Received on 29/04/2016, Paper accepted: 29/9/2016, Published online 28/03/2017

ABSTRACT:

Iron deficiency is considered to be one of the most prevalent forms of malnutrition. Iron deficiency is considered to contribute to death and disability as a risk factor for maternal and perinatal mortality, and also through its direct contributions to cognitive impairment, decreased work productivity, and death from severe anemia. On average, globally, 50% of the anemia is assumed to be attributable to iron deficiency. Africa and parts of Asia bear 71% of the global mortality burden and 65% of the disability-adjusted life years lost, whereas North America bears 1.4% of the global burden. There is an urgent need to develop effective and sustainable interventions to control iron-deficiency anemia. This review will focus on recent advances in our understanding of the burden of anemia in community, its causes, consequences and prevention through cheap and effective herb phoenix dactylifera linn.

Key words: Anaemia, Haemoglobin content, iron deficiency, prevalence, prevention, phoenix dactylifera linn

INTRODUCTION

A WHO expert group proposed that, anaemia or iron deficiency should be considered when the haemoglobin is below 11g\dl in adult pregnant females. (1)

As per some other authority, the Iron deficiency anaemia is the condition in which the haemoglobin is below 10 mg and there is clear evidence of iron deficiency. (2)

SEVERITY OF ANAEMIA:

According to ICMR, depending upon the haemoglobin levels, anaemia can be Categoriesed as follows(3)

Category	Anaemia severity	Hbgm/dl
1	Mild	10-10.9
2	Moderate	7.0-10.0
3	Sever	< 7.0
4	Very severe	< 4.0

Anaemia is a major public health problem worldwide. It is one of the most common disorders encountered during pregnancy. It is estimated to affect nearly two thirds of pregnant and one half of non-pregnant women especially in developing countries. Iron deficiency anaemia is said to be more prevalent in developing than in developed countries.

The incidence of iron deficiency anaemia is highest among women and young children varying between 60-70%. (1)

Iron deficiency anaemia is the most prevalent nutritional deficiency and hematolgic disorder in the world today. It is estimated that 30% of the global population or more than 1.5 billion people are anemic, more than half of those anemics believed to have iron deficiency. (4)

50% of the women are anemic in the developed countries and this contributes to the high ratio of maternal mortality.

About 95% of the pregnant women with anaemia have the iron deficiency type. (5) About 40-90% of pregnant women are anemic in India. (6) Anaemia is a single largest cause of death and is responsible for about 20% of maternal mortality in our country.(7)

There are many factors responsible for prevalence of anaemia (iron deficiency anaemia) during pregnancy in developing countries, especially in India, which includes deep-rooted beliefs, customs and superstitions regarding pregnancy, Childbirth, diet, hygiene and health. Also weakness, fatigue, exertionaldyspnoea, Palpitation, anorexia, vomiting, are attributed by the patient to pregnancy, hence the pregnant women do not visit the ANC clinic and these factors compounded with ignorance, is responsible for exacerbating the problem.

Anaemia is preventable, adequate diet and iron supplementations are the corner stones in eliminating this menace.

The system of Unani medicine believes in ‘ prevention is better than cure ‘. Thus we have tried to highlight the role of Unani system of medicine in prevention rather than cure of anaemia . Our aim is to prove the statements of great Unani physicians on scientific parameters and to prove the efficacy of iron rich diet mentioned in Unani literature in the light of modern parameters.

It is evident from ancient Unani literatures, written by eminent Unani physicians, that consumption of iron rich diet is a great weapon to fight against anaemia.

As being food item it is free from any side effect, tolerance is good, cost-effective and easily available.

Anemia is a Greek word. Where “an” stands for not, and “haemia” stands for blood, i.e. It can be defined as, a condition in which there is reduction in the quantity of RBC, haemoglobin and Packed cell volume.

It may be defined as, a deficiency of haemoglobin concentration of the blood due to the lack of red blood cells and its haemoglobin content. (8)

IRON:

Iron is an essential component of haemoglobin, transporting oxygen in the blood to all parts of the body. It also plays a vital role in many metabolic reactions. Iron deficiency can cause anaemia resulting from low levels of haemoglobin in the blood. Iron deficiency is the most widespread mineral nutritional deficiency throughout the world.

SOURCES: Iron and its salts are consumed in the diet and through supplementation. Iron

is present in a variety of foods of both plant and animal origin. In many foods there is a considerable variation in the value of iron content according to the soil and conditions in which the food is raised. Rich food sources of iron include meat, (especially liver), egg yolk and pulses such as beans and peas. However, many other Common foods such as green leafy vegetables, whole grain and enriched cereals Vegetables and fish are good sources of iron. Milk is a poor source of iron. [1,9,10,11]

FUNCTIONS OF IRON:

Iron is necessary for many functions in the body.

1. Transport of oxygen.
2. Synthesis of proteins and nucleic acid for energy production.
3. Multitude of metabolic reactions required for growth and reproduction.
4. Brain development and function.
5. Regulation of body temperature.
6. Muscle activity and catacholamine metabolism. [1,12]

FOOD IRON IS DIVIDED INTO:

(1) Haem (Haem iron is one which is present in the RBC, rather than Hb)

(2) Non–haem (inorganic) [1]

ABSORPTION:

1. **Iron absorption from Indian diets**:
   Cereals and millets are normally consumed unrefined and have phytates which interfere with iron absorption. Besides some millets (ragi, sorghum) and beans and some vegetables, other components of the diet like condiments contribute tannins, which are also strong inhibitors of iron absorption. [13]
2. **Dietary iron intake and its availability:**
   Washing the foods free of contamination lowers the iron content by about 20-30%. Thus true iron intakes in Indians are about 20-30% lower than those assessed earlier. [13]
   Iron absorption occurs from duodenum and upper part of jejunum. [14]
3. **Nutrient-Nutrient Interactions:**
   Vitamin C increases the absorption of iron.
   Vitamin B6 is necessary for the formation of hemoglobin, the iron-containing protein in red blood cells.

Excess consumption of calcium, copper, or magnesium carbonates could reduce the absorption of iron (iron combines with carbonates to form insoluble salts).

Iron competes with calcium, manganese, and zinc for absorption in the intestine and excess intake of one of these minerals could produce a deficiency of the others.

The tannins that occur in the bark and fruit of many plants bind with iron to form insoluble iron salts that are not absorbable by the body. This includes tea and coffee.

Phytates and phosphates in foods also reduce iron absorption. [15-17]

Absorption of iron takes place mainly in the upper portion of the small intestine. Most of the iron enters the blood stream directly and not via the lymphatics. [11,18]

The precise mechanism by which this absorption takes place across the mucosal cells is not known.

Iron absorption refers to the amount of dietary iron that body obtains from food. Healthy adults absorb about 15% of the iron in their diet, but actual absorption is influenced by;

body's iron stores, the type of iron in the diet, and by other dietary factors that either help or hinder iron absorption. (19-24)

The greatest influence on iron absorption is the amount stored in the body. Iron absorption significantly increases when body stores are low. When iron stores are high, absorption decreases to protect against iron overload. (19,22)

The availability of the iron in foodstuffs is very variable. Healthy subjects normally absorb only 5 to 10 per cent of the iron in their foods whereas iron-deficient subjects may absorb twice this amount. Therefore, on a diets consisting of 15 milligrams of iron, 0.75 to 1.5 milligrams of iron would be absorbed in a normal subject but as much as 3 milligrams in an iron-deficient subject. Similarly absorption is generally increased during growth and pregnancy, after blood donation, following bleeding and in other conditions where an enhanced demand for iron exists. (15, 16, 17, 19, 25-30)

DISTRIBUTION OF IRON IN THE BODY:

Two sets of iron contains compounds are found in our body.

1. **Essential iron contained compounds**; e.g., some enzymes like cytochrome catalase, peroxidase, and xanthine oxidase.
2. **Storage Iron**: Ferritin is iron + apoferritin. Apoferritin is a protein. Hemosiderin, which resembles ferritin, is another storage form of iron.
   Total body iron content is about 4mg of which iron in Haemoglobin alone accounts for 70%.

The average iron content of a healthy adult is only about 4 grams and yet this relatively small quantity is vitally important. About two-thirds of the iron in the body is present in the blood mainly as hemoglobin and approximately 3% is present as myoglobin. The majority of the remainder is storage iron, which is found in the liver, spleen, bone marrow and muscle in the form of ferritin or hemosiderin. Additional minute quantities exist in the respiratory enzymes and in iron-binding protein of the plasma. (9)

The average human male has approximate 4g of iron and the female has 3gms.The great bulk of the metal, (i.e, iron) about 75%, is found in red cells as a constituent of the protein haemoglobin (31).

EXCRETION:

There is no known metabolic mechanism for the excretion of iron. Adult males excrete about 1mg.During years of fertility women lose twice as much iron as man, or about 2mg/d. The amount of iron lost in regular menstrual period is about 30mg, which averages to about 1mg/d each month. This quantity is additional to the amount lost by the same processes as in males .In spite of seemingly small additional burden of 1mg iron loss per day it is this loss, that causes iron deficiency anemia to be much more prevalent in women than in men. (32,33)

Recommended dietary (iron) allowances for Indians(34);

GROUP	PARTICULARS	BODY WEIGHT kg	IRON mg/dl
MAN	Sedentary work	60	28
	Moderate work		
	Heavy work		
WOMAN	Sedentary work	50	30
	Moderate work		
	Heavy work		
	Pregnancy	50	38
	Lactation	50	30
	0-12 months		

STAGES OF IRON DEFICEINCY:
These can be divided in to 3 stages.
FIRST STAGE; NEGATIVE IRON BALANCE:
In which the demands for iron exceeds the body's ability to absorb iron from the diet. This stage can result from pregnancy.
SECOND STAGE:IRON DEFICEINT ERYTHROPOIESIS:
When iron stores become depleted, serum iron begins to fall. When transferrin saturation falls to 15-25% haemoglobin synthesis becomes impaired.
Iron deficiency is the state in which the content of the iron in the body is less than normal. Iron deficiency without anaemia is an advanced stage of iron deficiency, characterized by decreased or absent storage iron usually low serum iron concentration and transferrin saturation.
THIRD STAGE: IRON DEFIENCY ANAEMIA:
With the fall of haemoglobin and haematocrit, iron deficiency anemia manifest. Iron deficiency anaemia is the most advanced stage of iron deficiency it is characterized by decreased or absent iron stores, low serum iron concentration, low transferrin saturation and low hemoglobin concentration or haematocrit value. [35]
IRON DEFICIENCY ANEMIA IS DIVIDED IN TO THREE DEGREES: The normal level of haemoglobin present in an adult female is 12-14 gm%. Reduction in the normal haemoglobin level of the blood gives rise to iron deficiency anaemia. Thus depending upon the haemoglobin content of the blood it is divided in to following:

1. **Slight:** First degree or also known as slight iron deficiency anemia is a condition in which the heamgolobin level lies between 8-10 gm % in a circulating blood.
2. **Moderate:** Second degree or also known as moderate iron deficiency anemia is a condition in which the heamgolobin level is 6.5 or less than 8gm% in a circulating blood.
3. **Severe**: Third degree or also known as severe iron deficiency anemia is a condition in which, the heamgolobin level is less than 6.5gm%. [36]

ETIOLOGY AND PATHOGENESIS:

ETIOLOGY:

- DIETARY IRON DEFICIENCY
- MALABSORPTION OF IRON
- BLEEDING
- PREGNANCY

Iron deficiency could also be caused by low vitamin A status. Vitamin A helps to mobilize iron from its storage sites. So the deficiency of vitamin A limits the body's ability to use stored iron. This results in an "apparent" iron deficiency because hemoglobin levels becomes low, even though the body can maintain normal amounts of stored iron. [37,38]

INCIDENCE:

Iron deficiency is the commonest chronic malady of mankind, which is wide spread through out the world. It afflicts persons of all ages and economic groups, though it is more common among the very young women, among those on poor diets.
Data of WHO shows that anemia is principally due to iron deficiency.It affects approximately 30% of the world's population or about 1.3 billion persons, 43% of

preschool children, 51% of pregnant women and 37% of school age children.
Some degree of iron deficiency is very common during pregnancy. Iron deficiency is the most prevalent nutritional problem in the world. It has been stated that 2/3 of children and women of childbearing age in developing countries suffer from iron deficiency, out of which 1/3 suffering from severe deficiency and anaemia. In developed countries, between 10-20% of childbearing age women are said to be anaemic.

SYMPTOMS OF ANAEMIA INCLUDE;
Tiredness, lack of stamina, breathlessness, headaches, insomnia, loss of appetite and pallor. All these symptoms are associated with decreased oxygen supply to tissues and organs. The people with low iron levels have low level of resistance to infection. Research has also shown that it is associated with impaired brain function. The iron deficiency in infants can result in impaired learning ability and behavioral problems.

SIGNS OF IRON DEFICIENCY ANEMIA
In school children include feeling tired and weak, decreased work and school performance, slow cognitive and social development during childhood, difficulty in maintaining body temperature, and decreased immune function, which ultimately leads to decrease resistance to infection. (34-46)
CLINICAL FEATURES:
Fatigue, irritability and headaches are common complaints of patient with iron deficiency. The physical findings in iron deficiency anemia include pallor, glossitis, stomatitis, and angular cheilitis.
LABORATORY FINDINGS:
In severe uncomplicated Iron deficiency anemia the erythrocyte are hypochromic and microcytic. The plasma iron concentration is diminished. The iron binding capacity is increased. The serum ferritin concentration is low.
ERYTHROCYTES:
Anisocytosis, The anisocytosis is typically accompanied by mild ovalocytosis. As the iron deficiency worsens,there is often mild normochromic normocytic anemia (haemoglobin ≥11g/dl,mcv≤80fl)with further progression the mcv, mch, and haemoglobin all decline.
MARROW:
In severe Iron deficiency erythroblasts of the marrow may be smaller than normal with marrow, ragged rims of cytoplasm containing little haemoglobin Decreased or absent hemosiderin in the marrow is characteristic of Iron deficiency. The evaluation of marrow iron stores is sensitive and usually reliable means for the diagnosis of Iron deficiency anemia
SERUM IRON CONCENTRATION;

1. It is usually low in untreated Iron deficiency anemia, but in some cases it may remain normal. The measurement of serum iron concentration is subject to many variables that may cause substantial errors into the results. It decreases at about the time of menstruation, in presence of acute or chronic inflammatory process or malignancy and following acute myocardial infarction. The serum iron concentration under these circumstances may be decreased sufficiently to suggest iron deficiency Normal or high concentration.

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eISSN:2320-3137
www.earthjournals.in

REVIEW OF LITERATURE:
PHOENIX DACTYLIFERA LINN (DRIED DATE)

VERNACULAR NAMES:
Arabic: Tamer Yabis
English: Date Palm, Edible date
BOTANICAL NAME: phoenix dactylifera linn
TEMPERAMENT:
Hot[1] Wet[1] [(47)]Fresh fruit
Hot (mild) Dry (Mild) [(48)] Dry fruit
HABITAT:

This is a tall palm of native of North Africa, Egypt, Syria and Arabia, but now it is cultivated in Sindh, Punjab and Multan District. [(49)]

THE PLANT:

It is a tall palm up to 36 meter in the hieght. The trunk is covered over by persistent petiole bases. The base is surrounded by a dense mass of root suckers. The leaves pinnate up to 5 meter long.The lower pinnal is modified, into spines flowers in long spadices, unisexual. The fruits are oblong berries, reddish or yellowish brown in color when ripe.Its pulp is fleshy, sweet. Its seeds are cylindric and hard with a longitudinal furrow in front.

PARTS USED: Leaves, flowers, fruits, Seeds.

PROPERTIES:

One of the oldest known species of plant, i.e. 'Date' is today a food of preference not only for its delicious taste but also for its nutritious properties.

New benefits imparted by the date are being discovered every day and has come to be used as a medicine as well as a food.

The iron contained in dates control the synthesis of Haemoglobin in the Red blood corpuscles and ensures an appropriate level of R.B.C. in the blood. This is of vital importance in preventing anaemia during pregnancy and the development of the baby also. [(140)]

The dates have following properties.

- Haematinic [(50-52)]

due to the presence of Vitamin A, Vitamin B and iron it is considered to be good source of haemopoeisis [(47,52)]

- Highly nutritious: (51,53,54,55)
- Astringent (54)
- Antiseptic (54)
- It increases the viscousity of blood (54)
- Nervine tonic (52)
- fattening (51)
- General tonic (51)

USES:

- Nephropathy
- Strangury
- Gastropathy
- Bronchitis
- Burning Sensation (49)

CHEMICAL COMPOSITION:

- Calcium (50) 0.03mg/100gm
- Iron (47,52) 7.3 mg/100mg 10.6mg
- Protein (50) 3mg /100gm
- Phosphorus (56) 0.8mg/100gm
- Potassium (50)
- Salt (50,55)
- Sugar (50,52)
- Tannin (56)
- Vitamin A (50-52)
- Vitamin B (50-52,56)
- Vitamin C (56)
- Vitamin D

Thus, from above discussion it is evident that phoenix dactyliphera linn is a good source of iron.(50)

Hence it is selected in the study to evaluate the efficacy and its nutritive value in preventing iron deficiency anaemia

CONCLUSION:

From the above discussion it can be concluded that little modifications in our traditional diet can bring a tremendous change on the health status of the community.

This cost-effective and good compliance herb with generally no side effect can be used as very good preventive measure.It should be propagated on a mass level to eliminate such a grave menace.

Based on this review further clinical trials can be conducted to prove the efficacy of phoenix dactyliphera linn as a haematinic.

REFERENCES:

1.K. Park, Nov 2002, Park's Text Book of Preventive and Social Medicine, 17th ed, Banarsidas Bhanot, Jabalpur, India pg.423-424, 438.

2. Eugene, Braunwald, 2003, Harrison s Principles of Internal Medicine, Vol, I, McGraw Hill pg 662

3. John Studd, 2003, Progress In Obstetrics And Gynaecology, vol 15, Cherchil Livingstone, pg 104-106.

4. William N Kelly, 1992 Text Book Of Internal Medicine, 2nd ed, National Pub. Co., pg.1200.

5.V. Ruth Benett, Linda K. Brown, 1999, Myle's Text Book For Midwives, 13th ed, Harcourt Brace Co.ltd, Churchill Levingstone, pg 290.
6.Dr. Haresh U. Doshi, 2003, Clinical Cases in Obstetrics and Gyanecology, 1st ed, Arihant Pub B.C. Mehta, July 1970, Indian Journal Of Medical Science, vol-24, Nutritional Anaemia, page-26
7. B.C. Mehta, July 1970, Indian Journal Of Medical Science, vol-24, Nutritional Anaemia, page-26
8. Wahab Akhtar Aziz, 2002, Gem Medical Dictionary, 1st ed, Aejaz Publishing House, pg 40
9. L. Kathleen Mahan, Sylvia Escott-Stump, 2000, Krause's Food Nutrition And Diet Therapy, 10th ed. W.B. Saunders co. pg135.
10.Kusum Gupta, L. K. Gupta, Abhishek Gupta, 2000, Food And Nutrition Facts And Figuers, 5th ed, Jaypee Brothers, New Delhi pg52.
11. Staci Nix, 2005, William's Basic Nutrition And Diet Therapy, 12th ed, Elsevier, Delhi pg 142-143.
12. Internet Health Library 2000.
13. ICMR, 2004, Nutrients Requirements And Recommended Dietary Allowances For Indians, National Institute Of Nutrition, Hyderabad, page 43-49.
14. Sujit. K. Chaudhri, 2002, Concise Medical Physiology, 4th ed New Central Book Agency, Calcutta pg20.
15. M.C. Latham, M.D. et al, 1972, Scope Manual on Nutrition.
16.1996, The Merck Index, 12th edition.
17. Elizabeth Somer, M.A., R.D., 1992,The Essential Guide to Vitamins and Minerals.
18. J. S. Garrow, W.P.T.James, 1996, Human Nutrition and Dietetics, 9th ed, Churchill Levingstone, pg 178-181.
19.Greene-Finestone L, Feldman W, Heick H et al, 1989, Canadian Journal of Public Health, Infant Feeding Practices And Socio-Demogrphic Factors In Ottawa-Carleton. 80: pg173-176.
20. Canadian Task Force on the Periodic Health Examination: 1979, Canadian Medical Association Journal, The Periodic Health Examination, 121: pg 1193-1254
21. Chan-Yip A, Gray-Donald K: 1987, Canadian Medical Association Journal Prevalence of Iron Deficiency among Chinese Children Aged 6 to 36 months in Montreal; 136: pg 373-376, 378
22. Jacobs A: 1982,Clinical Haematology, Non-Haematological Effects Of Iron Deficiency.
23. Walter T, De Andraca I, Chadud P et al: Iron Eeficiency Anemia: 1989, Pediatrics, Adverse Effects on Infant Psychomotor Development; 84: pg 7-17
24. Lozoff B, Brittenham GM, Wolf AW et al: 1987, Pediatrics, Iron Deficiency Anemia and Iron Therapy: Effects On Infant Developmental Test Performance; 79: pg 981-995
25. Myres AW: Canadian Progress In The Promotion Of Breast-Feeding, 1965-1985. In Proceedings of the 12th World Conference on Health Education, Health Education Bureau, Dublin, 1987: 903-914
26.Tanaka PA, Yeung DL, Anderson GH: 1987 Canadian Medical Association Journal, Infant Feeding Practices: 1984-85 versus 1977-78; 136: pg 940-944
27.Duncan B, Schifman RB, Corrigan JJ Jr et al: 1985, Journal of Pediatrics Gastroenterolgy Nutrition, Iron And The Exclusively Breast-Fed Infant From Birth To Six Months; 4: pg 421-425
28.Wharton BA (ed): 1987,Nutrition and Feeding of Preterm Infants, Blackwell Pubns, Palo Alto, Calif, pg 113-142
29. Nutrition Recommendations: 1990, the Report of the Scientific Review Committee, Dept of National Health and Welfare, Ottawa.
30. Fairweather-Tait S J: Iron In Food And Its Availability. 1989, Acta Paediatrics Scand Supplimentation, 361: pg 12-20
31. Thomas Emery, 1991, Iron and your health facts and fallacies, crc press Florida, pg 1.
32. F.P.Antia, PhilipAbraham, 2002, Clinical Dietetics and Nutrition, 4th ed, Oxford University Press, New Delhi, pg 127.
33. Harsh Mohan, 1998, Text Book of Pathology, 3rd ed, Jaypee Brothers, New Delhi, page 401-402.
34.C. Gopalan, B. V. Rama Sastri & S. C. Balasubramanian, 2004, Nutritive Value Of Indian Foods, National Institute Of Nutrition, Indian Council Of Medical Research, Hyderabad India, pg 98.
35. Gerad N. Burrow, Thomas F. Ferris, 1998, Medical Complications During Pregnancy, 3rd ed, W. B. Saunders Co pg 67
36. D. C. Dutta, 1994,Textbook of Obstetrics, New Central Agency Calcutta, pg 50-57

37. Tunnessen W W Jr, Oski FA: 1987,Journal of Pediatrics Consequences Of Starting Whole Cow Milk At

6 Months Of Age; 111: pg 813-816
38. Fomon S J, Ziegler E E, Nelson S E et al: 1981, Journal of Pediatrics Cow Milk Feeding In Infancy: Gastrointestinal Blood Loss And Iron Nutritional Status; 98: pg 540-545
39. Gray-Donald K, Di-Tommaso S, Leamann F et al: 1990, Journal of Canadian Diet Association The Prevalence Of Iron Deficiency Anemia In Low Income Montreal Infants Aged 10-14 Months [abstr]; 51: pg 424
40.Friel J K, Andrews W L, Matthew J D et al: 1990, Canadian Medical Association Journal, Iron Status Of Very-Low-Birth-Weight Infants During The First 15 Months Of Infancy; 143: pg 733-737
41. Reeves J D: 1986, Pediatrics Review Iron Supplementation In Infancy; 8: pg 177-184
42. Chan-Yip A, Gray-Donald K: 1987, Canadian Medical Association Journal Prevalence of Iron Deficiency among Chinese Children Aged 6 to 36 Months in Montreal; 136: pg 373-376, 378
43. Saarinen U M, Siimes MA: 1979, Pediatrics Research Iron Absorption From Breast Milk, Cow's Milk, And Iron Supplemented Formula: An Opportunistic Use Of Changes In Total Body Iron Determined By Hemoglobin, Ferritin, And Body Weight In 132 Infants; 13: pg 143-147
44. Oski F A, Landaw SA: 1980, American Journal of Diseases of The Childrens Inhibition Of Iron Absorption From Human Milk By Baby Food; 134: pg 459-460
45. Siimes M A, Salmenpera L, Perheentupa J: 1984, Journal Of Pediatrics Exclusive Breast Feeding For Nine Months: A Risk Of Iron Deficiency; 104: pg 196-199
46. Forbes A L, Adams C E, Arnaud M J et al: 1989, American Journal Of Clinical Nutrition Comparison Of In Vitro, Animal, And Clinical Determinations Of Iron Bioavailability: International Nutritional Anemia Consultative Group Task Force Report On Iron Bioavailability; 49: pg 225-238
47.Hkm Mohd, Sayed Safiuddin, 2002, Unani Advia Mufreda, Offset Printer, New Delhi, pg 17-18, 147, 162-164.
48. Hkm. Mohd. Kabeeruddin, Bayaz-e-Kabeer, Vol. I. Shaukat Book Depot, Gujrat, Page. 166.
49. Arya Vaidya Sala, Kottakkal, 1997 'Indian Medicinal Plants' a Compendium of 500 Species, Vol.5 Orient Longman Limited, Chennai, pg 396-397.
50. MyDocuments/MiraclesofTheQuran-HaroonYahya.nun
51. Prof. Hkm. MOhd. Zahoorul Hasan 1989, Selected Herbo – Mineral Remedies, 1st ed, pg. 76-77, 97-98, 137-138, 156-157.
52.Iqbal Ahmad Qasmi, 2001, Kitabul Mufredat, International Printing Press Aligarh, pg, 18, 103, 184-185, 221.
53. Hkm. Abdul Hakeem, 2002, Bustanul-Mufredat Jadeed, H. S. Offset Press New Delhi, pg. 90, 246, 283, 558.
54. Mohd Najmul Gani Sahab, 1921, Khazainul-advia, vol 4, Akhbar Lahore, pg 148.
55. Ziyauddin Abdullah (translator) (Ibn-e-Baitar) Al-Jamiul-Mufridat-Al-Advia-Wal-Aghziyah (Urdu Translation), vol 1, CCRUM, Public Press New Delhi, pg 129-131, 349.
56. Hkm Ram Lubhaya, 1977, Goswami, Bayanul–Advia, Vol II 230-233, 1, Ala Press New Delhi, pg 67-69, 232-233.

Paper cited as: **Humaira Ansari , Asfia Tarannum.EFFICACY OF PHOENIX DACTYLIFERA LINN AS A GOOD HAEMATINIC IN THE PREVENTION OF IRON DEFICEINCY ANAEMIA- A REVIEW. International Journal of Medical and Applied Sciences. 2017;6(1): 11-20**